

3-6-81

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: MAR 6 1981

SUBJECT: Proposed Section 18 for the use of chlorothalonil on spearmint in Indiana

FROM: Edward Zager, Chemist  
Residue Chemistry Branch (TS-769)

*Edward Zager*

TO: Emergency Response Section  
Registration Division (TS-767)

THRU: Charles L. Trichilo, Chief  
Residue Chemistry Branch (TS-769)

*CT*

The State of Indiana requests a Section 18 exemption for the use of chlorothalonil on spearmint to control rust disease and Septoria leafspot. It is estimated that 1000-1200 acres will be treated during the 1981 growing season.

Not Included  
No previous Section 18 exemptions have been requested for chlorothalonil on mint. PP#1E2473 proposing a tolerance of 0.1 ppm for the combined residues of chlorothalonil and its metabolite 4-hydroxy-2,5,6-trichloroisophthalonitrile in or on mint hay is currently under review by RCB.

The proposed use would permit applications of Bravo 500 at the rate of 2 pints (1b act) per acre in 20-150 gallons of water for dilute sprays and 5-10 gallons of water for concentrate ground and aircraft applications. Up to 3 applications may be made per season. There is a 80 day PHI.

Fresh or spent spearmint hay is not to be fed to livestock.

Info  
The metabolism of chlorothalonil in plants has been discussed in connection with PP#4E1502 (Dr. R. Schmitt review dated 7/22/74). The residues of concern are chlorothalonil and the 4-hydroxy metabolite. While technical Daconil contains [REDACTED] no detectable residues of HCB are expected to occur in spearmint from this use.

Impurity  
Residue data have been submitted in connection with PP#1E2473. Field trials were conducted in Indiana in 1976 and 1977. Three applications of 1-2 lbs act/A were made. PHI's were 78 and 88 days.

GLC-EC methods were used to measure the residues. 1977 data were obtained through a modified Method I of PAM II. Recoveries of chlorothalonil from fortified samples of mint ranged from 60-120%, recoveries of the hydroxy metabolite from fortified samples ranged from 75 to 103%.

No detectable residues of either chlorothalonil or its hydroxy metabolite were found in the green spearmint hay or the oil from the 1 lb act/A (IX) rate. The spent hay showed traces of chlorothalonil but no detectable residues (<0.01 ppm) of the hydroxy metabolite.

Residues of up to 2.7 ppm chlorothalonil were found in the green hay from the 2 lb act/A rate while only traces of the metabolite were found in one sample (0.01 ppm). Residues of chlorothalonil in spent hay ranged up to 2.75 ppm while residues of the metabolite ranged up to 0.29 ppm. Residues in spearmint oil were non-detectable with exception of one oil sample which contained a trace (0.01 ppm) of the metabolite.

Based on the above data we estimate that combined residues of chlorothalonil and its 4-hydroxy metabolite are not likely to exceed 0.1 ppm in the green hay, the spent hay or the spearmint oil as a result of the proposed use.

Since fresh or spent spearmint hay will not be fed to livestock, there will be no problem with secondary residues in meat, milk, poultry and eggs.

#### Conclusions

1. Residues of chlorothalonil and its metabolite 4-hydroxy-2,5,6-trichloroisophthalonitrile are not likely to exceed 0.1 ppm in the green hay, the spent hay or the spearmint oil as a result of the proposed use.
2. Since fresh or spent spearmint will not be fed to livestock, there will be no problem with secondary residues in meat, milk, poultry and eggs.

#### Recommendation

TOX considerations permitting we have no objections to the proposed exemption. An agreement should be made with FDA regarding the legal status of the treated mint in commerce.

cc: Reading file  
Circu  
Reviewer  
Chlorothalonil SF  
Section 18 SF

TS-769:Reviewer:E.Zager:LDT:X77324:CM#:RM:810:Date:3/5/81  
RDI:Section Head:RJH:Date:3/3/81:RDS:Date: 3/5/81